Amendment Under 37 C.F.R. §1.111

Application No.: 10/560,228 Attorney Docket No.: 053460 Art Unit: 1793

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1. (Previously presented): A polishing slurry for metal, comprising an oxidizer, a metal oxide dissolving agent, a metal inhibitor, and water, wherein the metal inhibitor comprises:

a compound having an amino-triazole skeleton wherein an amino group is bonded to carbon in a triazole ring; and

a compound having an imidazole skeleton and represented by the following general formula (I):

wherein R₁, R₂ and R₃ each independently represent a hydrogen atom, an amino group, or a C₁- C_{12} alkyl chain provided that the case that all of R_1 , R_2 and R_3 are hydrogen atoms is excluded.

2. (Withdrawn): A polishing slurry for metal, comprising an oxidizer, a metal oxide dissolving agent, a metal inhibitor, and water, wherein the metal inhibitor comprises:

a compound having a triazole skeleton having no amino group; and

a compound having an imidazole skeleton and represented by the following general formula (I):

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$$R_1$$
 N
 R_2
 NH
 R_3

wherein R_1 , R_2 and R_3 each independently represent a hydrogen atom, an amino group, or a C_1 - C_{12} alkyl chain provided that the case that all of R_1 , R_2 and R_3 are hydrogen atoms is excluded.

3. (Withdrawn): A polishing slurry for metal, comprising an oxidizer, a metal oxide dissolving agent, a metal inhibitor, and water, wherein the metal inhibitor comprises:

a compound having an amino-triazole skeleton wherein an amino group is bonded to carbon in a triazole ring; and

a compound having a triazole skeleton having no amino group.

- 4. (Previously presented): The polishing slurry according to claim 1 or 3, wherein the compound having the amino-triazole skeleton is 3-amino-1,2,4-triazole.
- 5. (Previously presented): The polishing slurry according to claim 1 or 2, wherein the compound having the imidazole skeleton is at least one selected from the group consisting of 2-methylimidazole, 2-ethylimidazole, 2-(isopropyl)imidazole, 2-propylimidazole, 2-butylimidazole, 4-methylimidazole, 2,4-dimethylimidazole, and 2-ethyl-4-methylimidazole.
- 6. (Withdrawn): The polishing slurry according to claim 2 or 3, wherein the compound having the triazole skeleton having no amino group is at least one selected from the group consisting of 1,2,3-triazole, 1,2,4-triazole, benzotriazole, and 1-hydroxybenzotriazole.

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7. (Currently Amended): The polishing slurry according to any one of claims 1 to 3 claim 1, wherein the metal inhibitor comprises the compound having the amino-triazole skeleton, the <u>a</u> compound having the triazole skeleton having no amino group, and the compound having

8. (Previously presented): The polishing slurry for metal according to any one of claims 1 to 3, further comprising a water-soluble polymer.

the imidazole skeleton.

- 9. (Previously presented): The polishing slurry for metal according to claim 8, wherein the water-soluble polymer is at least one selected from polysaccharides, polycarboxylic acids, polycarboxylic acid esters, polycarboxylic acid salts, polyacrylamide, and vinyl polymers.
- 10. (Previously presented): The polishing slurry for metal according to any one of claims 1 to 3, wherein the oxidizer for metal is at least one selected from the group consisting of hydrogen peroxide, nitric acid, potassium periodate, hypochlorous acid, persulfates, and ozone water.
- 11. (Previously presented): The polishing slurry for metal according to any one of claims 1 to 3, wherein the metal oxide dissolving agent is at least one selected from the group consisting of organic acids, organic acid esters, ammonium salts of organic acids, and sulfuric acid.
- 12. (Previously presented): The polishing slurry for metal according to any one of claims 1 to 3, further comprising an abrasive.
- 13. (Currently Amended): The polishing slurry for metal according to any one of claims 1 to 3, wherein a metal film to be polished is said slurry is capable of polishing at least one metal selected from the group consisting of copper, copper alloys, copper oxides, oxides of copper

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alloys, tantalum and compounds thereof, titanium and compounds thereof, and tungsten and

compounds thereof.

14. (Withdrawn): A method for polishing a metal film by supplying the polishing slurry

for metal according to any one of claims 1 to 3 onto a polishing cloth of a polishing table while

moving the polishing table and a substrate having the metal film relatively in the state that the

substrate is pressed against the polishing cloth.

15. (Withdrawn): The polishing method according to claim 14, wherein the metal film is

at least one selected from the group consisting of copper, copper alloys, copper oxides, oxides of

copper alloys, tantalum and compounds thereof, titanium and compounds thereof, and tungsten

and compounds thereof.

16. (Withdrawn): The polishing method according to claim 14, wherein a laminate of

two or more metal films is continuously polished.

17. (Withdrawn): The polishing method according to claim 16, wherein a first film

which is first polished among the two or more metal laminated films is one or more selected

from copper, copper alloys, copper oxides, and oxides of copper alloys, and a second film which

is next polished among them is one or more selected from tantalum and compounds thereof,

titanium and compounds thereof, and tungsten and compounds thereof.

18. (Withdrawn): A polishing method, comprising a first polishing step of polishing a

wiring metal layer of a substrate, the substrate comprising an interlayer insulating film which has

a surface consisting of concave portions and convex portions, a barrier layer which covers the

interlayer insulating film along the surface thereof, and a wiring metal layer which fills the

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concave portions to cover the barrier layer, and thereby making the barrier layer at the convex

portions exposed, and a second polishing step of polishing at least the barrier layer and the wiring

metal layer at the concave portions after the first polishing step, thereby making the interlayer

insulating layer at the convex portions exposed, wherein the polishing is performed by use of the

polishing slurry for metal according to any one of claims 1 to 3 at least in the second polishing

step.

19. Cancelled.

20. Cancelled.

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